



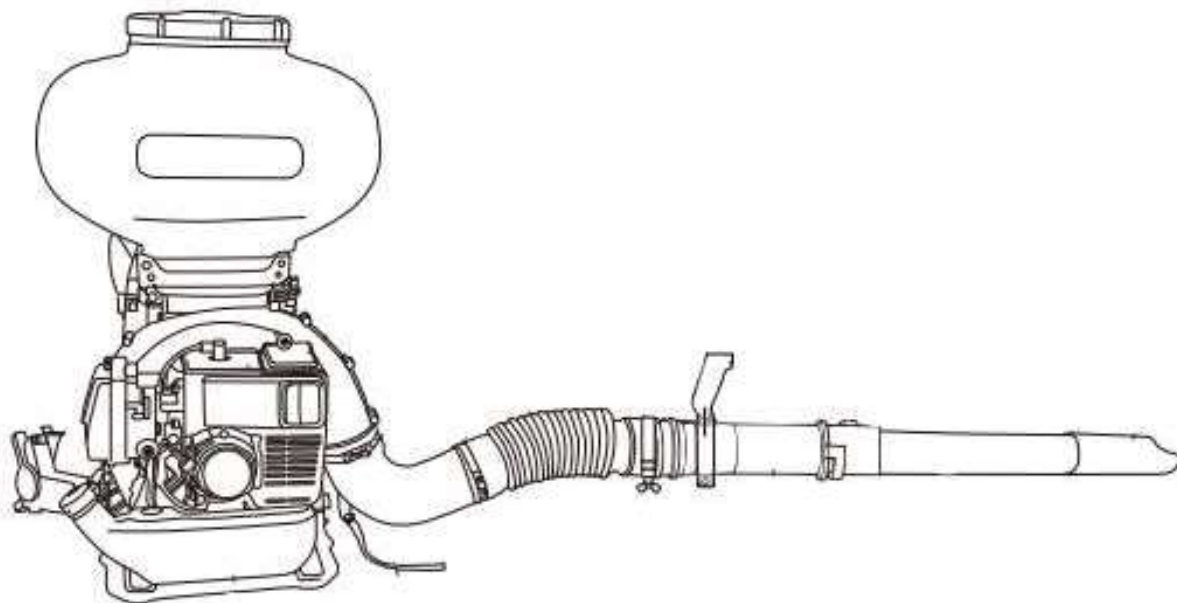
OWNER'S MANUAL

使用說明書

KNAPSACK MIST DUSTER

背負式肥料散佈機

MD-3000



CAUTION 注意

- Before using our products, please read this manual carefully to understand the proper use of your unit.
使用本產品之前請務必先閱讀本使用說明書。
- Keep this manual handy. 本使用說明書請妥善保管。

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For Safe Operation 正確使用須知

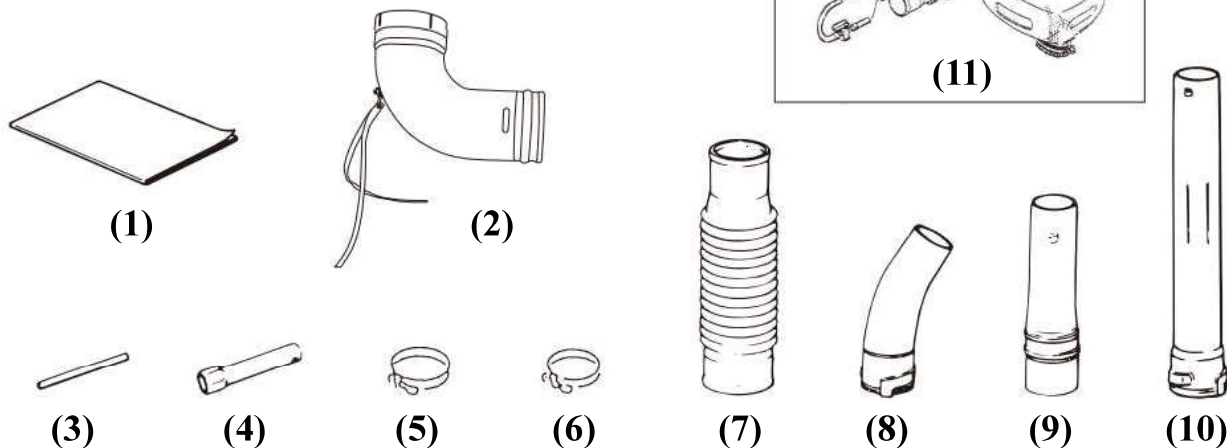
1. Read this manual carefully until you completely understand and can follow all safety notes, precautions, and operating instructions before using of the unit.
 2. Do not operate this tool when you are tired, ill, or under the influence of alcohol, drugs, or medication.
 3. When using the product, you should wear proper clothing and protective equipment that including Helmet, Ear protectors, Protection goggles and face protector, Thick work gloves, Non-slip-sole work boots.
 4. Do not wear loose clothing, jewelry, short trousers, sandals, or go barefoot. Do not wear anything which might be caught by branches or moving parts of the unit. Secure hair so it is above shoulder length.
 5. Never start or run the engine inside a closed room or building. Exhaust gases contain dangerous carbon monoxide.
 6. After starting the engine, if the blower tube continues to blowing when the throttle lever is at "STOP" position, please turn off the engine and take the unit to the servicing dealer authorized by the supplier for repair.
 7. After starting the engine, if the blower tube continues to blowing when the throttle lever is at "STOP" position, please turn off the engine and take the unit to the servicing dealer authorized by the supplier for repair.
 8. Fuel is highly flammable. Always keep open flames and sparks away from the unit and fuel depot. Do not smoke while refueling the unit or mixing fuel.
 9. When refueling the unit, make sure to stop the engine and allow it to cool down. Wipe spilled fuel completely from the unit. Move at least 3 meters away from fueling site before starting the engine.
 10. This product has been designed mainly for the purpose of moving debris such as leaves, grass cuttings, sand, straw, cobwebs and gravel. Please do not use it for any other purpose, as this may cause unforeseen accidents.
 11. Maintain the speed of the engine at the level required to perform spraying work, and never raise the speed of the engine above the level necessary.
1. 使用前請務必先認真閱讀本使用說明書，將產品的性能及使用上的注意事項理解清楚。
 2. 本產品如操作失誤將非常危險，故因疲勞、生病或飲酒等原因身體感到不適、判斷能力降低難以準確進行操作時，請勿使用本產品。
 3. 操作機器時請務必穿戴適當保護裝備，如頭盔、耳塞或耳罩、防塵眼鏡或臉部防護罩、手套、防護鞋...等裝備。
 4. 操作時請勿穿戴首飾或穿著褲腳寬大的褲子、短褲、涼鞋、草鞋或赤腳。長髮操作者，請務必將頭髮塞入頭盔內並確保不會掉出。
 5. 引擎排出的氣體裡含有對人體有害的一氧化碳，請不要在室內，溫室內或隧道內等通風不好的地方使用本產品。
 6. 開始作業前，務必認真檢查機體各部，在確認沒有螺絲鬆動、漏油、損傷或變形等異常情況後方可開始作業。
 7. 引擎啟動後，如加油柄在無效位置時，機器仍持續出風，必須馬上關掉引擎，將本產品交由供應商所授權之服務業者進行檢修。
 8. 在加油和儲油地區必須嚴禁煙火。禁止叨著香煙作業、加油或混合燃料。
 9. 在加油之前必須確認引擎停止並冷卻，加油後將燃料容器密封，然後要在離開燃料容器 3 米以上的地方啟動引擎。
 10. 本產品是用於道路清潔，清掃落葉、路面灰塵、砂粒、蜘蛛網、碎石等垃圾為目的而設計的，請勿用於其他目的。
 11. 引擎轉速請保持在作業需要的範圍之內，勿隨意提高引擎轉速。

For Safe Operation 正確使用須知

- | | |
|---|--|
| <p>12. While using the product, if abnormal noise or vibration occurs, stop the engine immediately and contact the nearest authorized servicing dealer for assistance.</p> <p>13. Pay attention to the direction of the wind, do not work against the wind.</p> <p>14. While operating please hold the grip firmly at all times and be careful not to point the blower tube in the direction of a fire, people or animals.</p> <p>15. Do not touch the spark plugs while the engine is running, as you may get an electric shock.</p> <p>16. In the event that any part must be replaced or any maintenance or repair work not described in this manual must be performed, please contact a representative from the store nearest authorized servicing dealer for assistance.</p> <p>17. Secure the unit before storage or transporting to prevent loss of fuel, damage or injury. Do not transport the unit while it has fuel in the tank, as these could leak out as a result of impact during transportation.</p> <p>18. Use only for tasks explained in the instruction</p> | <p>12. 操作機器時，如有不正常的噪音或震動產生，須馬上停止引擎，將本產品交由授權之服務業者進行檢修。</p> <p>13. 操作時需留意風向，避免逆風操作，否則將有揚塵污染或影響操作者視線之虞。</p> <p>14. 操作機器時請握緊操縱手柄，切勿將出風口或風管面對火源、他人或動物。</p> <p>15. 引擎啟動時，請勿觸碰火星塞，以免遭受電擊。</p> <p>16. 本說明書上已記載維持產品性能所必要的檢修方法，如需要進行本說明書上未敘述之檢修時，請聯絡鄰近所授權之服務業者進行檢修。</p> <p>17. 用汽車搬運時，請用繩索將機體牢固的固定在車槽內，以避免機體損壞或燃料外漏。油箱內裝有燃料時切勿搬運機體，避免燃料於運送途中漏出。</p> <p>18. 照本說明書的使用事項來操作此機器。</p> |
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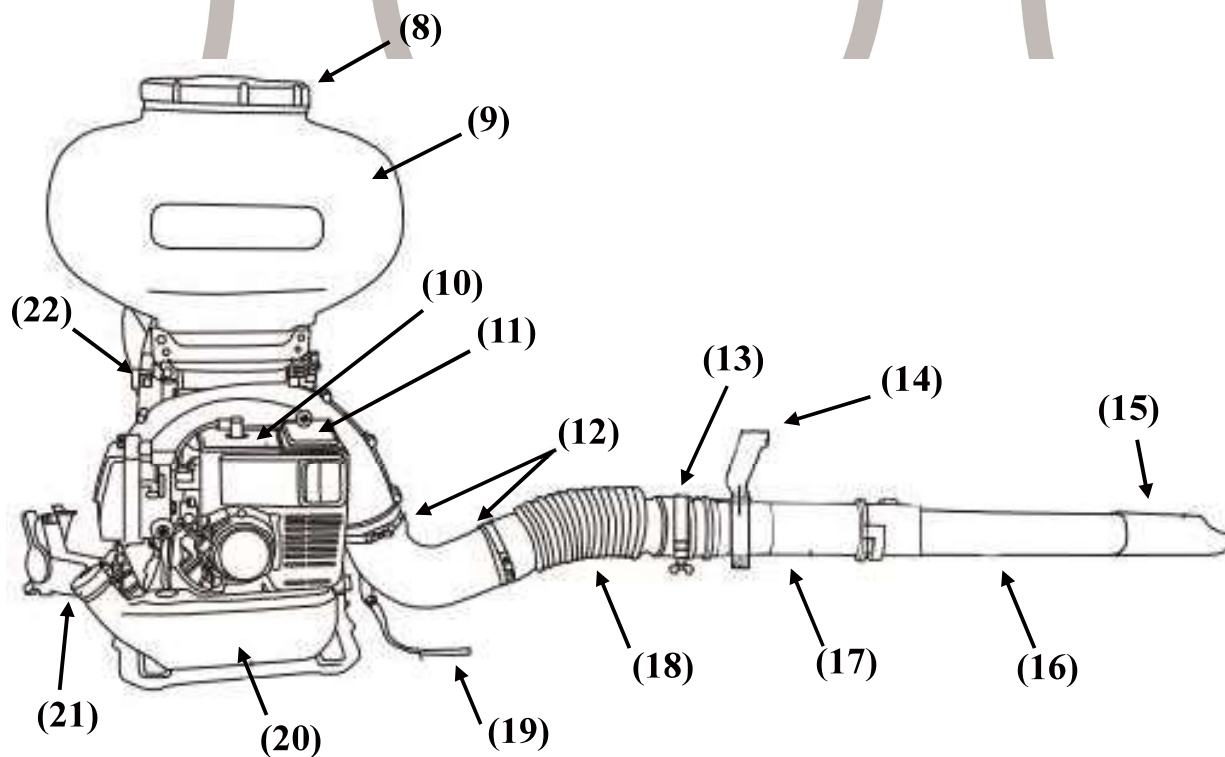
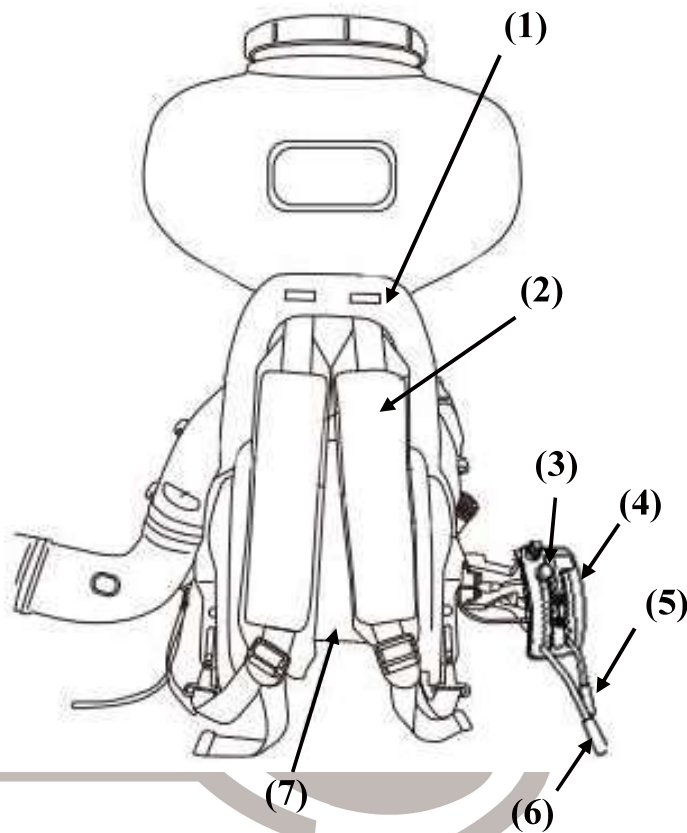
Parts Location 各部位名稱

- | | |
|---|--|
| <p>(1) Operator's Manual 操作手冊</p> <p>(2) Bent Pipe 彎管</p> <p>(3) Box Spanner Handle 火星塞套筒握把</p> <p>(4) Box Spanner 火星塞套筒</p> <p>(5) Band Large 大束帶</p> <p>(6) Band Small 小束帶</p> <p>(7) Flexible Pipe 出風軟管</p> <p>(8) Pipe C 出風管C</p> | <p>(9) Pipe A 出風管A</p> <p>(10) Pipe B 出風管B</p> <p>(11) Option (Mist Assembly) 選配(霧化組件)</p> |
|---|--|



Parts Location 各部位名稱

- (1) Knapsack Frame 背架
- (2) Knapsack Band 背帶
- (3) Shutter Lever Stopper 落粉調節桿固定鍵
- (4) Scale Board 刻度板
- (5) Throttle Lever 油門調節桿
- (6) Shutter Lever 落粉調節桿
- (7) Cushion Pad 背墊
- (8) Chemical Tank Cover 藥桶蓋
- (9) Chemical Tank 藥桶
- (10) Engine 引擎
- (11) Blower 風扇
- (12) Band, Large 大束帶
- (13) Band, Small 小束帶
- (14) Handle Holder 操縱手柄
- (15) Pipe C 出風管C
- (16) Pipe B 出風管B
- (17) Pipe A 出風管A
- (18) Flexible Pipe 出風軟管
- (19) Electricity Rejection Tape 靜電接地線
- (20) Fuel Tank 燃油箱
- (21) Fuel Tank Cap 燃油箱蓋
- (22) Lock Lever 藥桶固定鎖



NOTE 注意

A light lubricant may be used to ease assembly of flexible pipe to blower elbow.

可使用少量的潤滑油以幫助組合出風軟管至彎管。

● ASSEMBLY OF THE HOSE, PIPE AND THROTTLE LEVER

安裝風管及操縱手柄

1. Connect the Blower and the Flexible pipe with Pipe A.

裝上出風軟管(F1-1)及出風管 A(F1-2)。

2. Clamp both ends of the Flexible Hose securely with the hardware supplied with the unit. (F1)

軟管兩端以管束分別確實固定好。(F1)

3. Set up the Handle Holder (F2-1) to the Pipe A (F2-2) and tighten the screw (F2-3) on the Handle Holder (F2-1).

裝上操縱手柄(F2-1)於出風管 A(F2-2)上，並旋緊螺絲(F2-3)固定好操縱手柄(F2-1)。

4. Connect the Pipe A(F3-1), Pipe B(F3.2) and Pipe C(F3-3). Push the pipes together and turn them so they lock in relation to one another until the connection is locked.

旋轉連接出風管 A(F3-1)、出風管 B(F3-2)和出風管 C(F3-3)，將這些管子一起旋轉使其結合互相扣住固定。

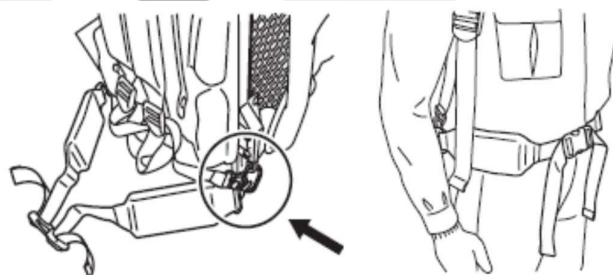
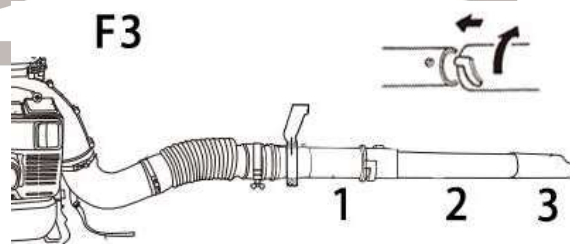
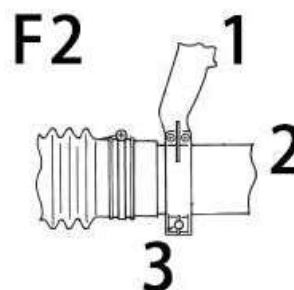
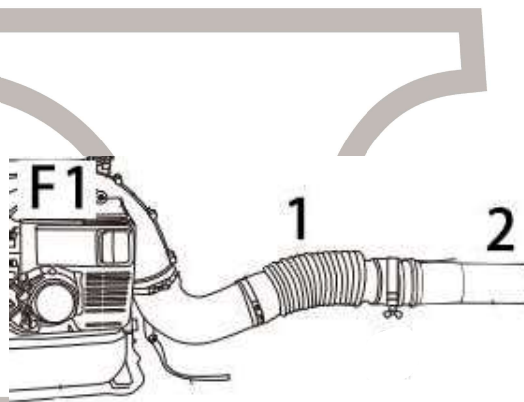
5. The waist belt is attached to the rings on the left and right sides of the frame. Be sure to always tighten the buckle in front of your body.

將腰帶上的掛鉤固定在背架下部左右兩端。背上機器，扣上腰帶並調整為適當長度。

WARNING! 警告!

If you are not using a waist belt, be sure to remove it from the unit. Otherwise, the belt may be sucked into the fan.

不使用腰帶時請務必拆下腰帶，禁止吊掛於機器上，否則可能捲入風扇內。



Before Operation 操作前說明

- **Throttle Lever**

The lowest step is the stop position. The throttle-lever adjusts the engine speed. High speed is obtained by moving the lever up.

油門調節桿

最低的位置是停止位置。油門調節桿調整引擎轉速。將槓桿向上移動可以獲得高速。

- **Shutter Lever**

The shutter lever adjusts the machine discharge quantity. The discharge quantity can be increased or decreased by moving the lever up or down while machine is operating.

落粉調節桿

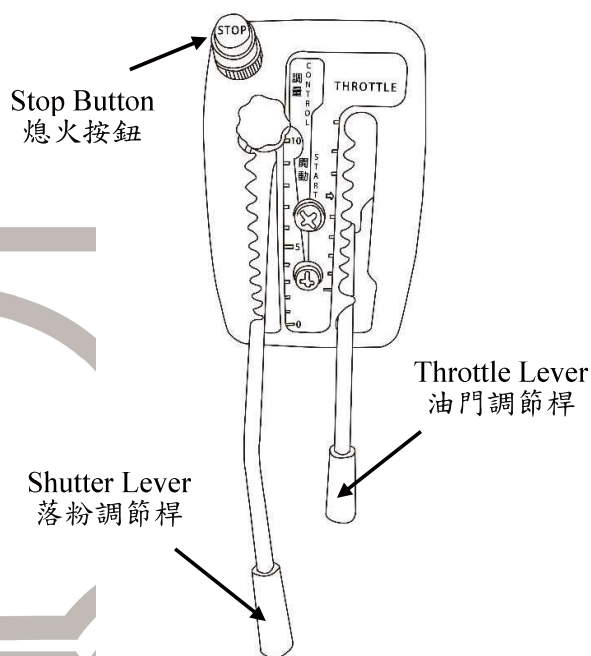
落粉調節桿調整機器的排放量。在機器運行時通過上下移動調節桿可以增加或減少排放量。

- **Shutter Arm**

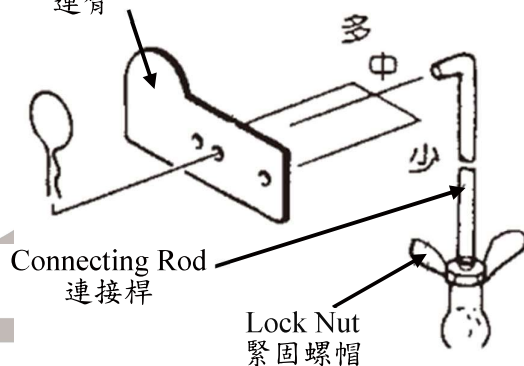
Select Much, Middle, or Few when adjusting the discharge quantity in response to the type of material being sprayed and the spraying method.

落粉臂

在調整排放量時，根據噴灑的材料類型和噴灑方法，請選擇「多」、「中」或「少」。



Link Arm 連臂



Powder Chemical ▶ 多
粉末化學物質

Fertilizer ▶ 中
肥料

Granule Chemical ▶ 少
顆粒化學物質

Before Operation 操作前說明

● Lock Lever

You can assemble or disassemble the chemical tank from fan-case body by one-step Lock Lever. This is done by operating the crescent shape lock lever. We can easily recover fertilizer from the chemical tank.

藥桶固定銷

您可以使用一鍵式藥桶固定半月銷將藥桶從風扇機殼上鎖定或分離。這是通過操作半月型藥桶固定銷來完成。可以將仍存有肥料的藥桶直接取下，以便回收肥料。

● Inspection before Starting

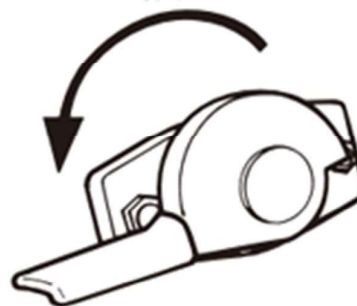
Inspect all locations for loose screws. Check the chemical tank mount for looseness.

啟動前檢查

檢查所有位置的螺絲是否鬆動。檢查藥桶是否鬆動。

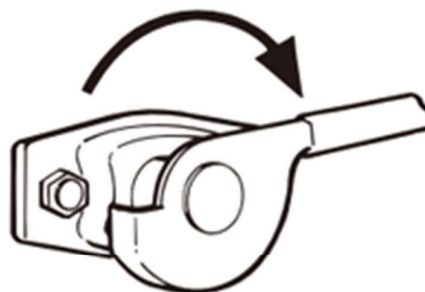
Tighten Lock Lever

緊固藥桶固定銷



Loosed Lock Lever

鬆開藥桶固定銷



NOTE 注意

- Loose screws may cause an accident.
鬆動的螺絲可能導致事故。
- Inspect the fuel hose and electric wiring for abnormalities. Also regularly maintain and replace the fuel hose and electric wiring.
檢查燃料管和電線是否有異常情況。定期維護和更換燃料管和電線。
- Adjust the length of the pack strap to fit your body.
調整背帶的長度以適應您的身體。
- When the warning label is peeled off the main unit, buy a new one and attach it.
當主機上的警告標籤被撕下時，請購買一個新的並貼上。

Before Operation 操作前說明

● Setting Shutter

1. Shutter lever position "O".
2. Set connecting rod into "中" setting and tighten lock nut. Adjust as necessary.
3. Secure connecting rod assembly with R-pin.

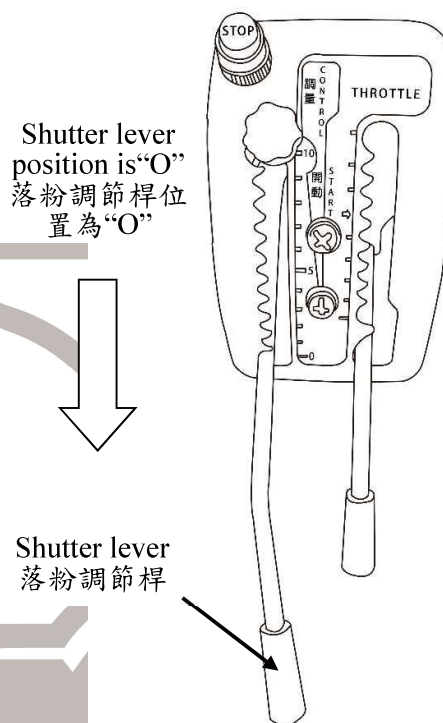
設置快門

1. 落粉調節桿位置為 "O"。
2. 將連接桿設置為 "中" 並鎖緊螺帽。根據需要進行調整。
3. 用 R 型鎖扣固定連接桿。

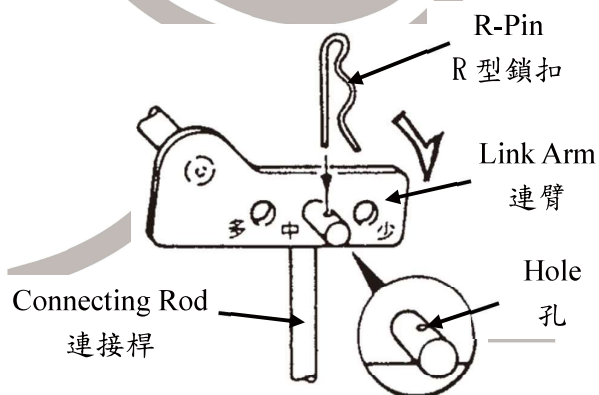
NOTE 注意

When connecting Rod is set to link arm. Link arm must be turned right full.

當連接桿設置為連臂時，連臂必須完全向右轉動。



Shutter lever
落粉調節桿



Duster (Powder) 除塵(粉末)	▲ 多
Fertilizer 肥料	▲ 中
Small Granular 小顆粒狀	▲ 少

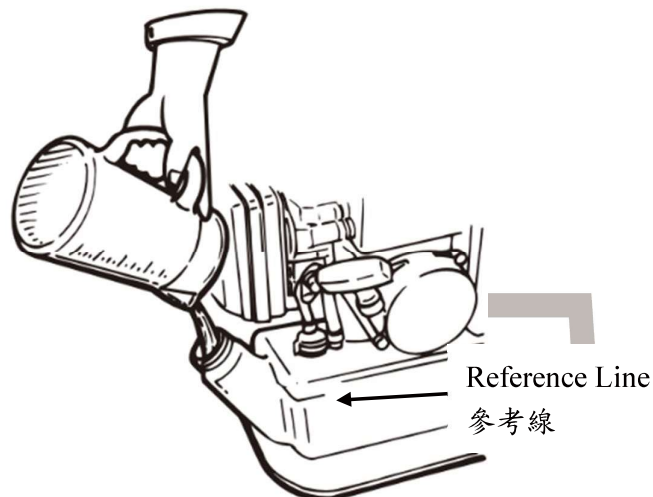
Fuel 燃料

- Mix a regular grade gasoline (leaded or unleaded, alcohol-free) and a quality-proven motor oil for air cooled 2-cycle gasoline engine use.

建議使用市場上銷售的無鉛汽油及二行程 FC 或 FD 級機油。

- Take care not to spill the fuel. If the fuel is spilled, wipe it off completely.

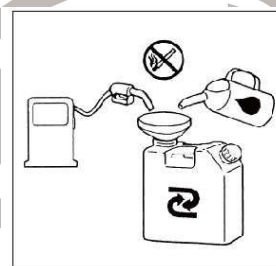
不要超過參考線注入油品。在停止引擎後注入油品。小心不要濺出燃料。如果燃料濺出，請完全擦拭乾淨。



- Recommended mixing ratio

建議汽油及機油混合比例：25: 1

Mix Chart 混合表					
Gasoline (liters) 汽油(公升)	1	2	3	4	5
2-cycle oil (ml.) 二行程機油(毫升 ml.)	40	80	120	160	200



WARNING! 警告!

- Keep open flames away from the area where fuel is handled or stored.
在加油和儲油地區必須嚴禁煙火。
- Mix and store fuel only in an approved gasoline container.
請使用適當的容器來混合或儲存燃料。

NOTE 注意

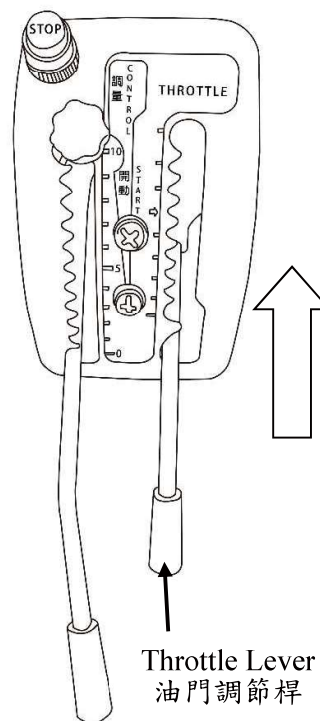
- Most engine troubles are caused, directly or indirectly, by the fuel used on the machine. Take special care not to mix a motor oil for 4-cycle engine use.
禁止使用 4 衝程引擎，或水冷 2 衝程引擎機油，否則會造成火星塞堵塞，排氣口不通暢，或活塞環障礙。

WARNING! 警告!

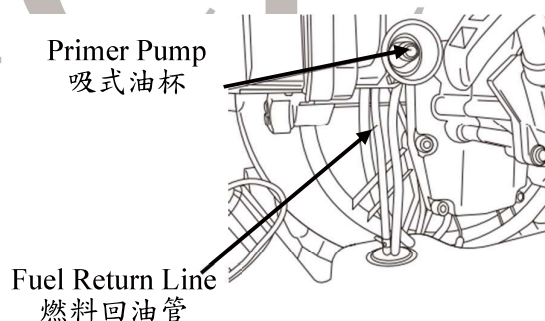
- Avoid operating the blower with the flexible tube and swivel joint disconnected. That will reduce the cooling air and the engine could be damaged by overheating.
避免未裝上軟管及連接管時啟動並操作機器，否則將因冷卻風量減少，運轉產生過熱現象。
- Avoid pulling the starter rope out to its full extent and allowing the starter rope to snap back. This will prevent premature damage to the starter.
拉出啟動器拉繩時，請勿將拉繩完全拉出，縮回時手握啟動拉柄讓拉繩慢慢縮回，以避免影響啟動器使用壽命縮短或致有任何損害。
- In order to prevent damage of the engine, 3 to 5 minutes' low speed rotation after start and before stop is very necessary.
每次啟動引擎後及停止引擎以前，請先調整為低轉速並維持至少三至五分鐘，以避免損害引擎。

Starting The Engine 啟動引擎

1. Push up the throttle lever 3 to 4 notches.
將油門調節桿向上推 3 至 4 個槽位。

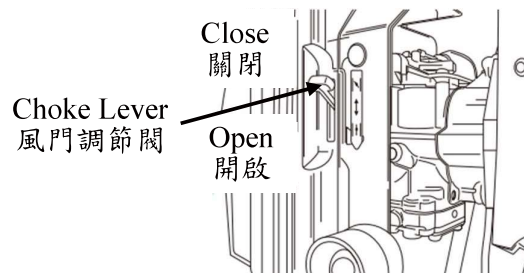


2. Operate the priming pump and check the return of premixed fuel via the return pipe.
按壓吸式油杯，並觀察透明迴油管，檢查預混燃料是否返回油箱。

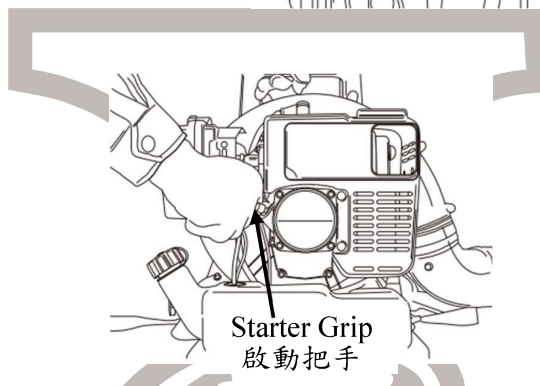


Operating Instructions 操作說明

3. Operate the choke lever.
上扳風門調節閥以關閉風門。



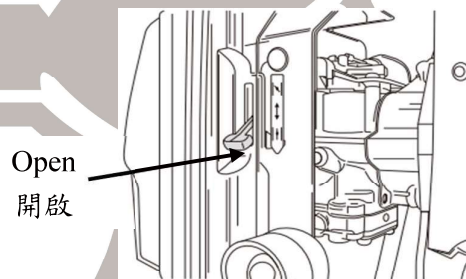
4. Start the engine by strongly pulling the start rope.
用力拉動起動繩啟動引擎。



5. Return the choke lever slowly.
緩慢下扳風門調節閥以開啟風門。

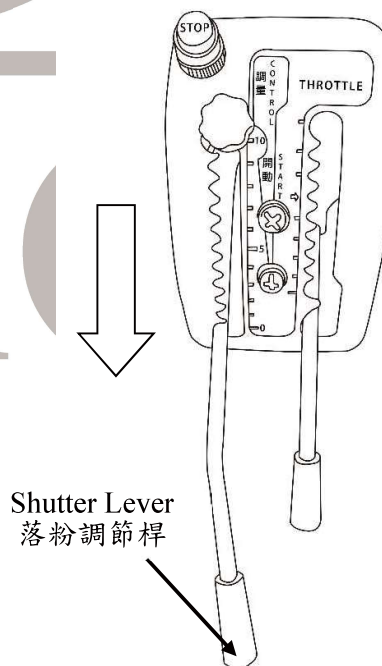
6. When the engine does not start Fully open the choke lever and pull the starting rope again. If the engine does not start using this method, please refer to “Troubleshooting

當引擎在完全打開風門時，仍無法順利請動運轉，請參閱”故障移除部分”。



● Supply The Chemical 供應化學品

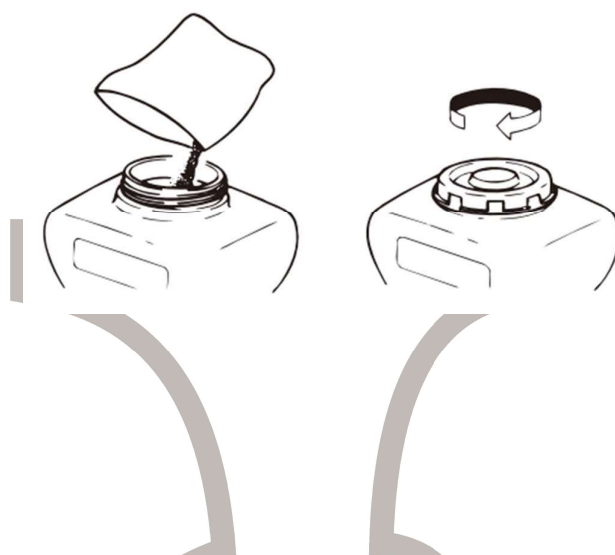
1. Align the shutter lever with “O”.
將落粉調節桿對齊至“O”。
2. Remove the lump and feed in the chemical being careful not to spill it on the outside. When pouring the chemical into the tank, be careful not to spill the chemical on the outside. Only fill the tank with the amount to be sprayed.
取下塊狀物，小心不要將化學品溢出到外面。倒化學品進入罐中時，小心不要將化學品溢出到外面。只填充要噴灑的量。



Operating Instructions 操作說明

3. Check the chemical tank cover packing and securely close the cover. If the cover is loose, it may effect the spraying. In addition, the chemicals might spill out and get on you. Use chemicals that do not contain foreign matter, such as dust, lump, and that are dried well.

檢查藥桶蓋的密封墊並將蓋子牢固地關閉。如果蓋子鬆動，可能會影響噴灑效果。此外，化學品可能會溢出並濺到您身上。使用不含異物（如塵土、塊狀物）且已充分乾燥的化學品。



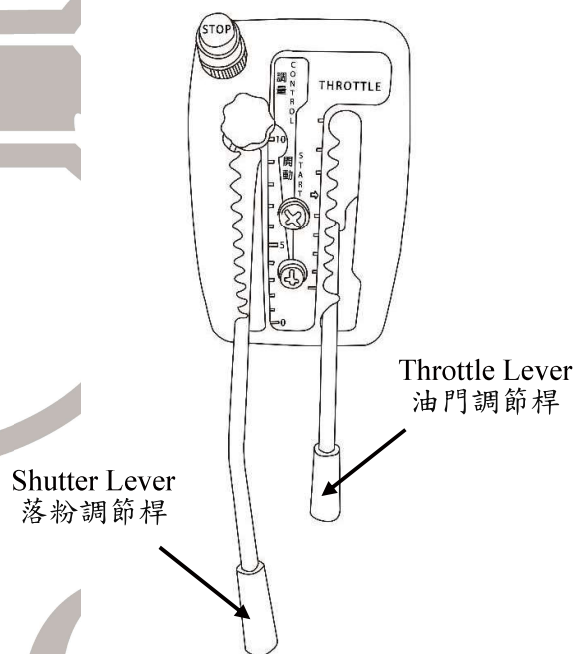
● Starting To Spray 開始噴灑

1. Refer to the [Spray Plan Table] to see how far the shutter must be opened. Move the shutter lever stopper and align it with necessary opening.

參考[噴灑計劃表]，查看調節桿必須開啟多少。移動落粉調節桿固定鍵，並將其對齊到所需的開啟位置。

2. Shoulder the machine on your back.
將機器背在背上。
3. Operate the throttle lever and align it with the discharge nozzle. The lever is operated by pushing lightly to wards the outside.
操作油門調節桿，將其對齊到排出噴嘴。輕輕向外推動槓桿即可操作。

4. Pull the grip of the shutter lever and bring it to a position that is easy to operate.
拉動落粉調節桿的把手，將其調整到容易操作的位置。
5. Raise the shutter lever to begin spraying.
提高落粉調節桿以開始噴灑。



● Finishing Spray 完成噴灑

Push down the shutter lever and finish spraying.

將落粉調節桿向下推，結束噴灑。

Operating Instructions 操作說明

● Stopping The Engine 停止引擎

1. Pushdown the shutter-lever and throttle lever to the lowest stage and stop spraying.

將落粉調節桿與油門調節桿推下至最低位置，停止噴灑。

2. Press the stop button to stop the engine.

按下熄火按鈕，停止引擎。

NOTE 注意

● Use up all the fertilizer in the chemical tank continuously without intermitting dispersion as far as possible.

盡可能連續地使用藥桶中的所有肥料，避免間歇性噴灑。

● When closing the shutter while the fertilizer is in the tank, move the shutter lever down slowly.

當罐中仍有肥料時關閉調節桿，請慢慢移動落粉調節桿向下。

● Quick or forced closing of the shutter may cause biting of the fertilizer, resulting in equipment failure.

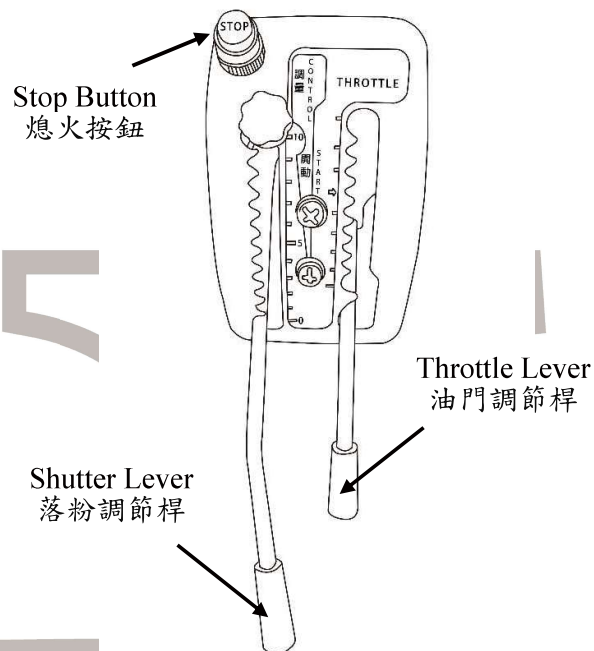
快速或強行關閉快門可能導致肥料夾在中間，導致設備故障。

● When the discharge of fertilizer frequently stops during spraying, remove the clog and then raise the shutter lever one step and increase the spray speed.

在噴灑過程中，如果肥料排放頻繁停止，請清除堵塞，然後將落粉調節桿提高一個檔位，增加噴灑速度。

● When there is still fertilizer in the chemical tank after the work is finished, recover the fertilizer.

當工作完成後，如果藥桶中仍有肥料，請將其收回。



Discharge Quantity Graph 排放量圖

- Use the preceding graphs as a scale of reference for setting the degree of shutter aperture. Try to blow all fertilizer or seeds continuously, without stopping until the tank goes empty. Don't stop the blowing operation on the way, leaving chemicals in the tank or store the machine with chemicals in the tank, otherwise it will be vulnerable to rust and stain. If closing the shutter with fertilizer or seeds in the tank, lower the lever slowly. If the shutter is suddenly closed or forced to shut, fertilizer or seeds may be caught between the shutter and tank bottom packing, which not only prevents the shutter from closing all the way, but may also causes troubles. When fertilizer or seeds get stuck during operation, raise the shutter one stage upper to increase fan speed.

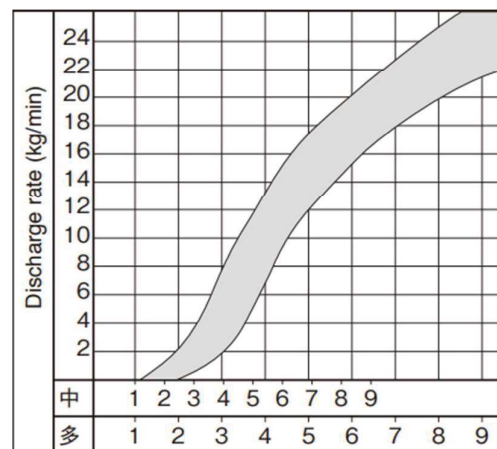
使用前述的圖表作為設置快門開度的參考尺度。嘗試連續地將所有肥料或種子吹出，直到罐子完全空了。不要在路途中停止吹送操作，使化學品留在罐子中，或將機器存放在帶有化學品的罐子中，否則會容易生鏽和污漬。如果在罐子中有肥料或種子，要關閉快門時，慢慢降低槓桿。如果快門突然關閉或被強制關閉，肥料或種子可能會夾在快門和罐底墊之間，這不僅會阻止快門完全關閉，還可能引起故障。在操作中如果肥料或種子被卡住，可以將快門升高一個檔位，以增加風扇轉速。

- Cleaning**
Do the same cleaning procedures as stated in the dust blower, but because of fertilizer being highly hygroscopic and corrosive, clear the tank of residual chemicals thoroughly.

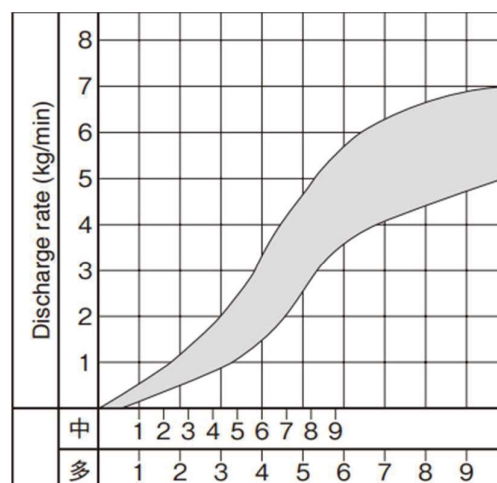
清潔

執行與除塵器相同的清潔程序，但由於肥料具有高度吸濕性和腐蝕性，請徹底清除殘留化學品中的罐子。

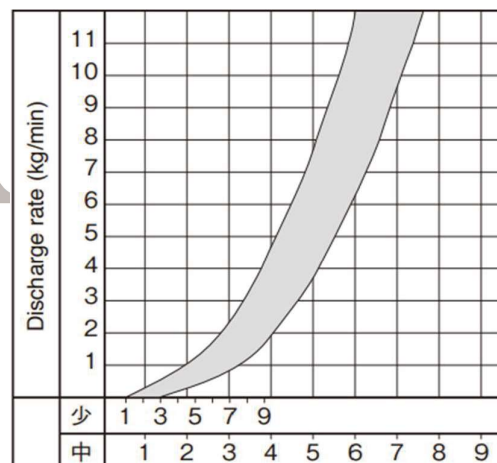
Fertilizer Link position is “多” or “中”.
肥料連桿的位置應該是“多”或“中”。



Duster (Powder) Link position is “多”.
除塵器（粉末）的連桿位置應該是“多”。



Small Granular Link position is “少”.
小顆粒的連桿位置應該是“少”。



Accurate Discharge Calculation Method 準確計算排放方式

- The discharge may differ according to the relative humidity, type of chemical, etc. Use the graph and table as a guideline
排放量可能會因相對濕度、化學品類型等因素而有所不同。使用圖表和表格作為指導。

- Accurate discharge can be obtained as follows :

1. Set the intermediate rod in the shutter arm according to the type of the chemical to be sprayed.
2. Perform a test spray by setting to the planned shutter opening.
3. Measure the required number of seconds for the test and calculate by substitution.
Discharge quantity (kg/min)=Input quantity ×60Time for discharge(sec).

可以通過以下方法獲得準確的排放量：

1. 根據要噴灑的化學品類型將連桿設置在落粉臂中。
2. 通過設置計劃的快門開度進行測試噴灑。測量測試所需的秒數，並通過代入計算。
3. 排放量（千克/分鐘）=輸入量×60 排放時間（秒）。

- The walking speed can be calculated more accurately by using this value.

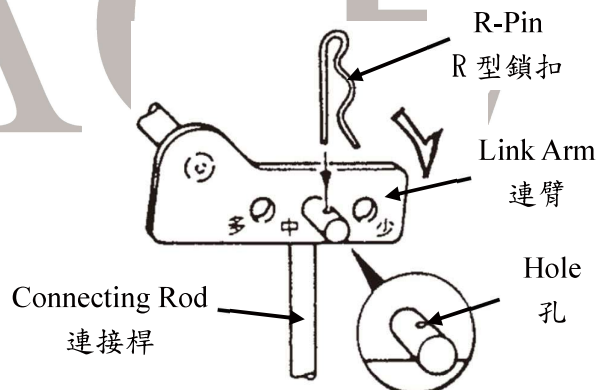
可以使用這個值更準確地計算行走速度。

WARNING! 警告!

- Perform the above method especially for the first spray of a 1kg/10a granule chemical. 尤其對於首次噴灑 1kg/10a 顆粒化學品，執行上述方法。
- Pay special attention to prevent too much spraying of the chemical. 特別注意防止化學品噴灑過量。
- When performing dispersion, pay attention to the NOTICE for the chemical or fertilizer to be applied. 在進行散布時，請注意化學品或肥料的使用注意事項。

Chemical Tank Cleaning 藥桶清洗

1. Remove the chemical tank. Take out the R-pin and pull out the intermediate rod.
取下藥桶。取出 R 型鎖扣，並拉出中間桿。



Chemical Tank Cleaning 藥桶清洗

2. Open the tank shutter, remove the chemicals in the tank, and clean the tank. Turn lock lever and remove the tank.

打開罐子的快門，取出罐子中的化學品，清洗罐子。轉動固定槓並移除罐子。

3. Take out the discharge-case and clean and inspect the interior of the blower.

取出排出箱，清潔並檢查風扇內部。

4. Install the chemical tank.

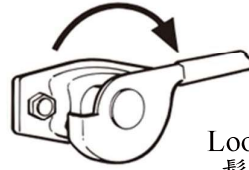
安裝藥桶。

5. The chemical tank shall be loosened in advance.

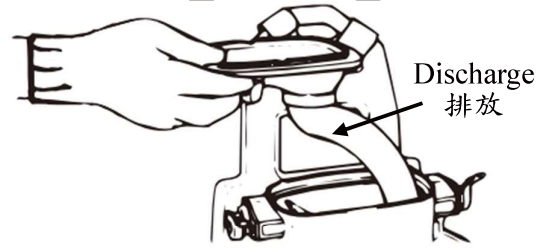
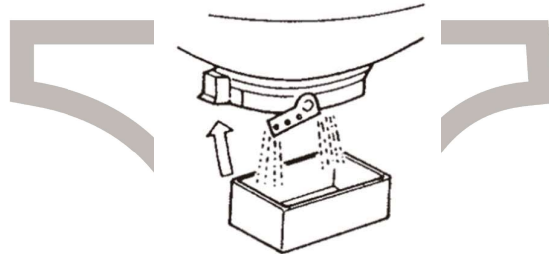
藥桶應提前鬆開。

WARNING! 警告!

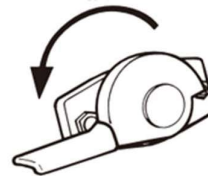
- Tightening shall be made alternately to hold both sides (Lower than horizontal).
鬆緊應交替進行以保持雙側（低於水平線）。
- When fertilizer is sprayed, the shutter may become stuck or metal parts may corrode, therefore, careful cleaning is required.
在噴灑肥料時，快門可能會卡住，金屬部件可能會腐蝕，因此需要仔細清潔。
- If the removed chemical tank is placed on the floor, place it with the cover facing down.
如果取下的藥桶放在地板上，請將罐子蓋朝下放置。



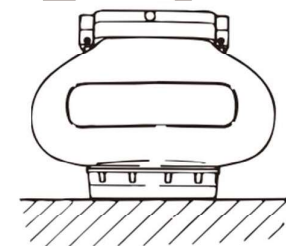
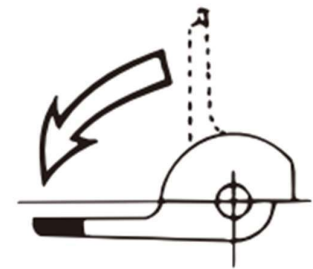
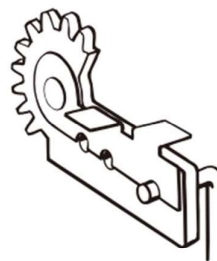
Loosed Lock Lever
鬆開藥桶固定銷



Discharge
排放



Tighten Lock Lever
緊固藥桶固定銷



Periodic Maintenance Chart 定期維護表

WARNING! 警告!

- Do not attempt to start or operate a mist duster that indicates a fuel leak.
- Always remove the spark plug cap from spark plug when servicing the engine to prevent accidental starting.
- 請勿嘗試啟動或操作出現燃油泄漏的噴霧器。
- 在維修引擎時，請始終將火星塞帽從火星塞上拆下，以防止意外啟動。

MAINTENANCE 維護	Interval 間隔 / Intervalo 間距 / Intervalo 間隔				
	Daily 每日	First 20 hours 前 20 小時	First 20 hours 前 20 小時	First 50 hours 前 50 小時	First 100 hours 前 100 小時
Check and replenish fuel 檢查並補充燃料	●				
Check for fuel leakage 檢查是否有燃料洩漏	●				
Check bolts, nuts and screws for looseness and loss 檢查螺栓、螺母和螺絲是否鬆動或遺失	●				
Clean fuel filter 清潔燃油過濾器			●		
★ Clean air filter element ★ 清潔空氣過濾器元件			●		
Tighten bolts and nuts 擰緊螺栓和螺母		●		●	
Clean spark plug and adjust electrode gap 清潔火星塞並調整電極間隙				●	
M★ Remove dust and dirt from cylinder fins M★ 清除汽缸散熱片上的灰塵和污垢				●	
M Remove carbon deposits on piston head and inside cylinder M 清除活塞頭和汽缸內部的碳沉積				●	

Periodic Maintenance Chart 定期維護表

MAINTENANCE 維護	Interval / Intervalo / Intervalo				
	Daily 每日	First 20 hours 前 20 小時	First 20 hours 前 20 小時	First 50 hours 前 50 小時	First 100 hours 前 100 小時
M Remove carbon deposits in the exhaust pipe of muffler M 清除消聲器排氣管中的碳沉積				●	
M Clean net of spark arrester (if equipped) M 清潔火星塞防護網 (如果裝備了)				●	
M Check the sliding portion of crankshaft, connecting rod etc. M 檢查曲軸、連接桿等的滑動部位					●
Fuel tube 燃油管	It is recommended to replace every 3 years. 建議每 3 年更換。				

NOTE 注意

The service intervals indicated are to be used as a guide.

M: Service to be performed by an authorized Maruyama engine dealer.

★: Service more frequently under dusty conditions.

所指示的服務間隔僅供參考。

M: 由授權的 Maruyama 引擎經銷商執行的服務。

★: 在多塵情況下更頻繁進行服務。

Maintenance 檢修

WARNING! 警告!

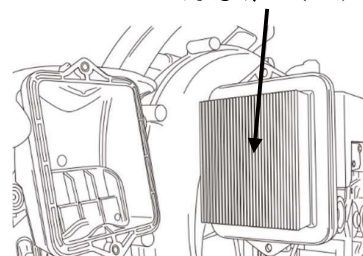
Before cleaning, inspecting, or repairing the unit, make sure that the engine has stopped and is cool.
 清理、檢查或修理機器前，先確認引擎已停止並冷卻。

● Air Filter 空氣過濾器

Check and clean the filter element in warm, soapy water as required daily after work. Dry completely before installing. If the element or the paper filter is broken or shrunk, replace with a new one.

每日工作結束後，請將空氣過濾器的外蓋卸下來，清除內部的塵污。濾綿過髒的時候，請用溫水加中性洗滌劑清洗乾淨，待其完全乾燥後重新安裝再用。如濾綿、或者過濾紙已變形或破損，請予以換新。

Air Filter (Paper)
空氣濾清器(紙)



IMPORTANT! 重要!

A clogged air filter may increase fuel consumption while cutting down the engine power. And operate the engine without the air filter or with a deformed filter element will quickly ruin the engine.

如空氣濾清器的濾氣海綿沾污過多卻繼續使用，會使引擎的機能降低。相反，如果不加墊海綿或使用變形或破損的海綿，會導致引擎內部異常消耗磨損。

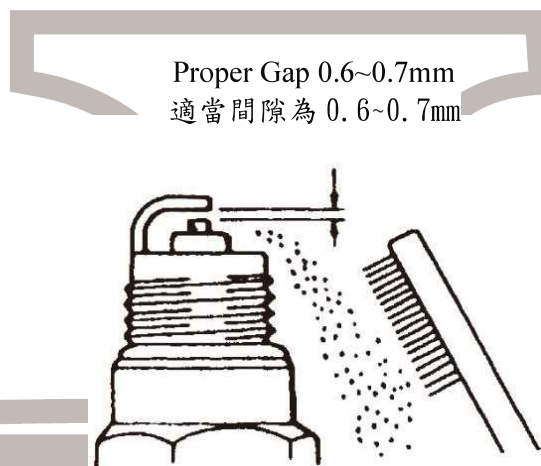
● Spark Plug 火星塞

Starting failure and mis-firing are often caused by a fouled spark plug. Periodically clean the spark plug and replace with a new one as required. The spark gap should be adjusted to 0.6 to 0.7 mm.

火星塞堵塞會引起引擎工作不良，請定期清理並適當更換火星塞。卸下火星塞，然後用鋼絲刷清除電極上附著的污垢。電極的間隙 0.6~0.7 mm 為妥。

REPLACEMENT PLUG IS NGK BPMR7A, OR SAME TYPE SPARK PLUG.

更換火星塞時請使用指定產品 NGK BPMR7A、或同型火星塞。



● Cooling Fins 散熱片

Free passage of air flow through the cylinder cooling fins is required to prevent poor engine performance and shortened engine life. Regularly check and clean all debris from the cooling fins.

需要通過汽缸散熱片的空氣流暢通，以防止引擎性能不佳和引擎壽命縮短。定期檢查並清理散熱片上的所有碎屑。

● Muffler And Exhaust Ports 消音器和排氣孔

The muffler should be removed and serviced after each one fifty (50) hours of use. At the same time, the exhaust ports should be cleaned and inspected.

每使用 50 小時後，應拆下消聲器進行維修。同時，應清潔和檢查排氣口。

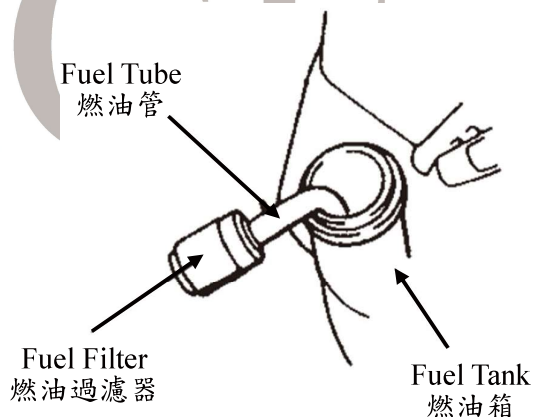
● Fuel Filter 燃油過濾器

1. The fuel filter should be cleaned and inspected for damage after each twenty (20) hours of use.

每使用 20 小時後，應清潔和檢查燃油過濾器是否損壞。

2. The fuel filter is attached to the fuel pick-up tube inside the fuel tank. Loosen the clamp and take out the fuel filter.

燃油過濾器附在燃油箱內的燃油吸取管上。鬆開夾子，取出燃油過濾器。



Maintenance 檢修

● Fuel Filter 燃油過濾器

3. To clean the fuel filter, remove it from the fuel tube and wash it with safety solvent. Inspect and clean the fuel tank before re-installing the fuel filter.

清洗燃油過濾器時，將其從燃油管上取下，用安全溶劑清洗。在重新安裝燃油過濾器之前，檢查並清潔燃油箱。

4. Always replace a defective fuel filter.

總是更換有缺陷的燃油過濾器。

● Spark Arrester 火星塞防護網

1. Remove the screw from the muffler.

將消聲器上的螺絲拆下。

2. Take the spark arrester out off the muffler, and then clean by brushing it.

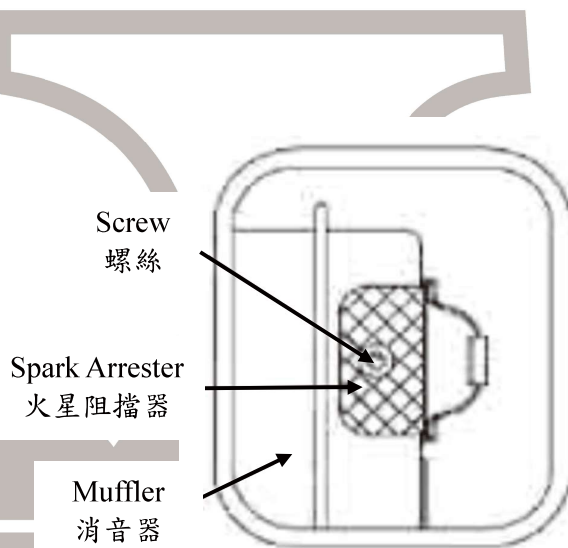
將火星塞防護網從消聲器上取下，然後用刷子清潔。

3. Return the spark arrester to the muffler.

將火星塞防護網放回消聲器中。

4. Tighten the screw securely.

緊固螺絲。



Storage 存放

MAINTENANCE BEFORE STORAGE 長期存放之前的檢修

IMPORTANT! 重要!

- Old fuel left in the carburetor may cause starting failure. When a series of operation finished, make sure to empty the fuel tank and run the engine until it uses all the fuel left in the fuel line and the carburetor.

舊燃料殘留會堵塞油路影響引擎啟動不順甚至無法啟動，每次使用完畢後，建議將燃料箱裡的燃料全部倒出，並啟動引擎，直到其自然熄火停止為止。

- Check all parts and the functions. If the failed or damaged parts have been found, replace them with new ones.

清潔機體的髒污，同時檢查各部位有無損傷或鬆動等。發現有異常時，應該徹底維修調整以備下次使用。

- Store the unit indoor in a dry location and out of the reach of children and other unauthorized persons, taking necessary measures for rust prevention.

將機體存放於室內乾燥處，避免讓孩童或非操作者本人接觸此機器，並作好適當防塵裝置。

Disposal 廢棄處置

When disposing your machine, fuel or oil for the machine, be sure to allow your local regulations.
丟棄機器、燃料或潤滑油時，請依據並遵守當地相關法規處理。

Specifications 產品規格

NAME 名稱		KNAPSACK MIST DUSTER 背負式肥料散佈機	
MODEL 型號		MD-3000	
SPREADER RANGE 噴灑距離 (METER)		MIN \geq 17 米/M	
TANK CAPACITY 藥桶容量 (Litre)		30	
ENGINE 引擎	ENGINE TYPE 引擎型式	2-STROKE, SINGLE CYLINDER, FORCE AIR-COOLED, GASOLINE ENGINE 二行程，單汽缸，氣冷，汽油引擎	
	DISPLACEMENT 排氣量 (C.C.)	79.4	
	CYLINDER DIA./STROKE 汽缸直徑/行程 (mm)	53 / 36	
	STANDARD POWER 標定功率 (HP/r/min)	3 / 7000	
	CARBURETOR TYPE 化油器型式	DIAPHRAGM TYPE 膜片式	
	IGNITION SYSTEM 磁電機型式	Electronic CDI 電子 CDI	
	SPARK PLUG 火星塞型號	NGK BPMR7A	
	FUEL TANK CAPACITY 油箱容量	1.3 Liter 公升	
	FUEL 燃油牌號	Lubricating oil mixed gasoline 90#以上汽油	
	MIXING RATE 燃油、潤滑油容積混合比	WITH 2 STROKE OIL LEVEL FC OR FD 25 : 1 使用市場上銷售的二行程 FC 或 FD 級機油 25 : 1	
STARTER 啟動方式	STARTER RECOIL 反沖啟動式		